

c.) Amendments to the claims.

Please amend claims 1-10 as follows:

Claim 1. (currently amended) A method for production of plant storage lipids containing polyunsaturated fatty acids comprising providing ~~The use of~~ an enzyme mixture containing at least one enzyme with phospholipid:diacylglycerol acyltransferase activity ~~for the production of plant storage lipids containing polyunsaturated fatty acids.~~

Claim 2. (currently amended) ~~The use as claimed in method of claim 1, wherein an~~ the enzyme mixture ~~containing at least one enzyme with phospholipid:diacylglycerol acyltransferase activity and further contains~~ at least one further enzyme ~~with the activity~~ of a hydroxylase, epoxygenase, acetylenase, desaturase, elongase, conjugase, trans-desaturase, or isomerase or combination thereof is employed.

Claim 3. (currently amended) ~~The use as claimed in method of claim 1 or 2,~~ wherein ~~an~~ the enzyme mixture ~~containing an enzyme with phospholipid:diacylglycerol acyltransferase activity, further contains~~ desaturase activity and elongase activity is employed.

Claim 4. (currently amended) ~~The use as claimed in any of claims 1-3 for the production of~~ method of claim 1, wherein the polyunsaturated fatty acids comprise long-chain polyunsaturated fatty acids.

Claim 5. (currently amended) ~~The use according to any of claims 1-4 for the production of~~ method of claim 1, wherein the polyunsaturated fatty acids comprise one or more of gamma-linolenic acid, arachidonic acid, gamma-linolenic acid, eicosapentaenoic acid, stearidonic acid or docosahexaenoic acid.

Claim 6. (currently amended) The ~~use as claimed in any of claims 1-5~~ method of claim 1, wherein the at least one enzyme ~~with PDAT activity~~ is encoded by a nucleotide sequence which is capable of replication, is present in a plant cell in at least 2 copies ~~and/or or~~ contains regulatory sequences ~~bringing that bring~~ about an at least 2-fold increase in gene expression ~~and/or or~~ enzyme activity.

Claim 7. (currently amended) The ~~use as claimed in any of claims 1 to 3~~ method of claim 6, wherein the ~~replicating~~ nucleotide sequence ~~encoding an enzyme with PDAT activity~~ is encoded chromosomally or extrachromosomally.

Claim 8. (currently amended) The ~~use as claimed in any of claims 1 to 4~~ method of claim 6, wherein the nucleotide sequence ~~encoding an enzyme with PDAT activity~~ is derived from plants.

Claim 9. (currently amended) The ~~use as claimed in any of claims 1 to 5~~ method of claim 6, wherein the nucleotide sequence ~~encoding an enzyme with PDAT activity~~ is derived from *Arabidopsis thaliana*.

Claim 10. (currently amended) The ~~use as claimed in any of claims 1 to 6~~ method of claim 1, wherein the at least one enzyme ~~with PDAT activity encompasses an comprises~~ the amino acid sequence as shown in of SEQ ID No.2 ~~encoded by a nucleotide sequence as shown in SEQ ID No. 1 or alleles thereof~~.

Please add the following as new claims 11-__:

Claim 11. (new) The method of claim 1, wherein the at least one enzyme or a part thereof is encoded by the nucleotide sequence of SEQ ID No. 1 or alleles thereof.

Claim 12. (new) The method of claim 1, wherein the polyunsaturated fatty acids contain fatty acids with conjugated double bonds.

Claim 13. (new) The method of claim 1, wherein the polyunsaturated fatty acids comprise fatty acids with a chain length of at least 14 carbon atoms and having at least 3 double bonds.

Claim 14. (new) The method of claim 1, wherein the polyunsaturated fatty acids comprise fatty acids not naturally found in plants.

Claim 15. (new) A method for producing polyunsaturated acids from a plant comprising:

increasing a phospholipid:diacylglycerol acyltransferase activity of said plant; and
isolating the polyunsaturated fatty acids.

Claim 16. (new) The method of claim 15, wherein increasing comprises increasing the copy number of a gene that encodes a phospholipid:diacylglycerol acyltransferase enzyme.

Claim 17. (new) The method of claim 15, wherein increasing comprises increasing the catalytic or regulatory activity of one or more enzymes involved in synthesis of fatty acids.

Claim 18. (new) The method of claim 15, wherein increasing comprising transforming said plant with a nucleotide sequence.

Claim 19. (new) The method of claim 18, wherein the nucleotide sequence comprises SEQ ID No. 1 or a homolog or allele thereof.

Claim 20. (new) The method of claim 19, wherein the homolog has a sequence which is at least 60% identical to said nucleotide sequence.

d.) Remarks.

Applicant has amended the specification to insert headings where appropriate, a summary (taken for the claims), and language regarding incorporation by reference and the scope of the various embodiments. Applicant has further amended claims 1-10 and added new claims 11-20, all to more clearly define the invention. Support for all amendments and new claims can be found in the existing claims and the specification. For example, new claim 11 is supported in original claim 10. New claims 12-14 are supported in the specification at page 3, lines 28-33. New claims 15-17 are supported in existing claim 1 and also in the specification at page 6, lines 14-21. New claim 18 is supported in the specification at page 8, lines 13-20. New claims 19 and 20 are supported in original claim 10 and also in the specification at page 10, lines 27-34. Accordingly, no new matter is presented with these amendments and new claims.

Accordingly, claims 1-20 are now pending. For the convenience of the examiner, a clean copy of all pending claims is attached hereto.

Conclusion

The application is in condition for examination and the prompt issuance of an office action is earnestly solicited. If there are any fees due with the filing of this Preliminary Amendment, not otherwise accounted for herein, including any fees for an extension of time, applicant respectfully requests that extension and further requests that any and all such fees be charged to Deposit Account No. 03-1952.